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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,541	02/23/2004	John Sinko	1406.17406-PROV FOR CIP	7750
26308 7590 01/09/2008 RYAN KROMHOLZ & MANION, S.C. POST OFFICE BOX 26618 MILWAUKEE, WI 53226			EXAMINER ZHENG, LOIS L	
			ART UNIT 1793	PAPER NUMBER'
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/784,541	SINKO, JOHN	
	Examiner	Art Unit	
	Lois Zheng	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 and 27-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1, 7 and 9-10 are amended in view of applicant's amendment filed 24 October 2007. Claims 17-26 are canceled in view of applicant's amendment. Claims 13-16 and 27-36 remain withdrawn from consideration. Therefore, claims 1-12 are currently under examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinko 6,129,610 (Sinko) and in view of King et al. US 4,497,719(King).

Sinko teaches a process for treating aluminum or steel with a corrosion-inhibiting composition.

Regarding claims 1, 4, 6-12 and 17-25, the process as taught by Sinko includes applying a coating composition comprising a material selected from di-mercapto, polymercapto and their derivatives such as DMTD and/or TMT compounds and their derivatives, and metal cations such as Zn(II), Al(III), Mg(II), Ca(II), Sr(II), Ti(IV), Zr(IV), Ce(III or IV) and Fe(II or III); drying and curing the applied coating; and subsequently coating the coated metal with paint, as recited in instant claims 1, 4, 6-12 and 17-25 (abstract; column 1, lines 16-20; column 5, lines 45-67; column 6, lines 24-31 and 51-

53; column 7, lines 5-33, examples). Sinko teaches the specific sulfur-containing compound claimed in instant claims 6-7, 9-10, 18-24 (column 8, lines 10-49).

However, Sinko does not explicitly teach the cationic species as claimed.

King teaches metal salts of 1,2,4-thiadiazole used in lubricants and capable of withstanding extremely high pressure and maintaining antiwear properties(col. 1 lines 7-12, abstract). King further teaches that the suitable metal for this metal salt are Cu, Zn, Co, Ni, Zr, Ag, etc.(col. 1 line 66 - col. 2 line 2, claim 4).

Therefore, one of ordinary skill in the art would have found it obvious to have substituted the metal cations such as Zn and Zr as taught by Sinko with Cu, Co, Ni and Ag as taught by King with expected success since King teaches that these metal cations are functionally equivalent.

With respect to the claimed water solubility as recited in claims 1 and 3, even though Sinko in view of King do not explicitly teach the claimed water solubility, one of ordinary skill in the art at the time that the invention was made would have found the solubility of the coating composition obvious because the composition taught by Sinko in view of King is substantially the same as the composition recited in the claims. Therefore, one of ordinary skill in the art would expect that the coating composition taught by the Sinko in view of King would be substantially the same as applicant's coating composition, including its solubility in water, see MPEP 2112.01.

With respect to the claimed coating thickness as recited in claim 2, even though Sinko in view of King do not explicitly teach the claimed coating thickness, one of ordinary skill in the art at the time that the invention was made would have found the

thickness of the coating obvious because the Sinko teaches the step of coating the substrate in an amount that is effective to bring about a corrosion inhibiting effect (abstract). Because one of ordinary skill in the art would know the amount that produces the corrosion inhibiting effect, one of ordinary skill in the art would find the thickness of the coating obvious in order to provide the corrosion inhibiting effect, including a thickness corresponding the known corrosion-inhibiting amount that overlaps the claimed range of thickness. See MPEP 2144.05

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sinko in view of King, and further in view of Ernhofer et al US 5,171,861(Ernhofer).

The teachings of Sinko in view of King are discussed in paragraph 3 above. However, Sinko in view of King do not explicitly teach the claimed protective composition incorporated into a silane-base gel coating as claimed.

Ernhofer teaches adding mercapto group containing organic compounds such as DMTD to a lubricant in order to improve antioxidant, antiwear and corrosion inhibiting characteristics(col. 1 line 63 – col. 3 line 2). Ernhofer further teaches the lubricant can be synthetic oils, such as silane, employed as grease(col. 3 lines 54-65). Therefore, Ernhofer teaches incorporating mercapto group containing organic compounds such as DMTD into a silane-based gel lubricant.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the mercapto group containing organic compounds such as DMTD in the process of Sinko in view of King into a silane-based gel lubricant as taught by Ernhofer

in order to improve antioxidant, antiwear and corrosion inhibiting characteristics of a lubricant as taught by Ernhofer.

Response to Arguments

5. Applicant's arguments filed 24 October 2007 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

Application/Control Number:
10/784,541
Art Unit: 1793

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ


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